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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/813,473 | 03/30/2004 | Iwao Anzai | 8305-223U1 (NP136-1) | 4805 |

570 7590 10/29/2004

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| EXAMINER |
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LANGEL, WAYNE A

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| ART UNIT | PAPER NUMBER |
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1754

DATE MAILED: 10/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.



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| SERIAL NUMBER | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. |
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EXAMINER

ART UNIT

PAPER NUMBER

DATE MAILED:

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

☒ This application has been examined ☐ Responsive to communication filed on _____ ☐ This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), _____ days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- | | |
|---|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited by Examiner, PTO-892. | 2. <input type="checkbox"/> Notice of Draftsman's Patent Drawing Review, PTO-948. |
| 3. <input checked="" type="checkbox"/> Notice of Art Cited by Applicant, PTO-1449. | 4. <input type="checkbox"/> Notice of Informal Patent Application, PTO-152. |
| 5. <input type="checkbox"/> Information on How to Effect Drawing Changes, PTO-1474. | 6. <input type="checkbox"/> _____ |

Part II SUMMARY OF ACTION

1. ☒ Claims 1-4 are pending in the application.

Of the above, claims _____ are withdrawn from consideration.

2. ☐ Claims _____ have been cancelled.

3. ☐ Claims _____ are allowed.

4. ☒ Claims 1-4 are rejected.

5. ☐ Claims _____ are objected to.

6. ☐ Claims _____ are subject to restriction or election requirement.

7. ☐ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.

8. ☐ Formal drawings are required in response to this Office action.

9. ☐ The corrected or substitute drawings have been received on _____. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable; ☐ not acceptable (see explanation or Notice of Draftsman's Patent Drawing Review, PTO-948).

10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on _____, has (have) been ☐ approved by the examiner; ☐ disapproved by the examiner (see explanation).

11. ☐ The proposed drawing correction, filed _____, has been ☐ approved; ☐ disapproved (see explanation).

12. ☐ Acknowledgement is made of the claim for priority under 35 U.S.C. 119. The certified copy has ☐ been received ☐ not been received ☐ been filed in parent application, serial no. _____; filed on _____.

13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.

14. ☐ Other

EXAMINER'S ACTION

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The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this

Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4 are rejected under 35 U.S.C. § 103 as obvious over WO 99/64150 or Fukunaga '600 or Grieve et al. or Wieland et al. in view of Ino et al. WO 99/64150, Fukunaga '600, Grieve et al. and Wieland et al. all disclose autothermal processes for producing a fuel gas wherein the catalyst comprises a platinum group metal such as ruthenium on an alumina support, wherein the catalyst may also contain cerium oxide. (Fukunaga '828 is considered to constitute an English translation of WO 99/64150, since it is the U.S. equivalent thereof.) See paragraphs [0049] and [0050], and claim 4 of Grieve et al.; paragraph [0012] and claims 1-8 of Wieland et al.; paragraph [0102] and claims 1-12 of Fukunaga '600; and column 5, line 24 - column 6, line 59 of Fukunaga '828. The difference between the processes disclosed by Grieve et al., Wieland et al., Fukunaga '828 and Fukunaga '600, and that recited in applicant's claims, is that these references

do not specifically disclose that the support should contain 5 to 40% by mass of the cerium oxide and 60 to 95% by mass of the aluminum oxide. Ino et al. discloses a catalyst for steam reforming of hydrocarbons comprising a platinum group metal on a carrier which comprises 5 to 40 weight percent of ceria and 60 to 95 weight percent of alumina. (See the Abstract, column 3, lines 14-30 and the paragraph bridging columns 3 and 4.) It would be obvious to employ the carrier of Ino et al. as the carrier for the catalyst in the process of Wieland et al. or Grieve et al. or WO 99/64150 or Fukunaga '600, since all these primary references suggest that the carrier may contain any suitable amounts of alumina and ceria, and it is well-known that the steam reforming reaction is one of the reactions which occurs during autothermal reforming. (See, for example, paragraphs [0004] and [0005] of Wieland et al., and claim 4 of Grieve et al.) It is noted that Fukunaga '600 has an effective filing date of November 5, 2001, which is before the filing date of the instant application, but after applicant's foreign priority date. However there is no certified English translation of applicant's foreign priority document of record, so it cannot be determined whether applicant is entitled to a foreign priority date of May 11, 2001.

Claim 4 is rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and

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distinctly claim the subject matter which applicant regards as the invention. The recitation of "boiling point within the range of those thereof" is indefinite.

Hwang et al., Towler et al. and Martin et al. are made of record for disclosing autothermal processes employing a catalyst which includes ruthenium.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wayne A. Langel whose telephone number is (571) 272-1353. The examiner can normally be reached on Monday through Friday from 8 A.M. to 3:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman, can be reached on (571) 272-1358. The fax phone number for this Group is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either private PAIR or public PAIR. Status information for unpublished applications is available through private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the private PAIR system, contact the Electronic

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Business Center (EBC) at 866-217-9197 (toll-free).

WAL:cdc

October 27, 2004

Wayne A. Langel
WAYNE A. LANGEL
PRIMARY EXAMINER